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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,701	01/29/2004	David K. Kovalic	38-21(53535)B	6459

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EXAMINER	
ZHOU, SHUBO	

ART UNIT	PAPER NUMBER
1631	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/767,701	KOVALIC ET AL.	
	Examiner	Art Unit	
	SHUBO (Joe) ZHOU	1631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 February 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2 and 8-13* is/are pending in the application.

4a) Of the above claim(s) *10-13* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2 and 8-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

RCE

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/4/09 has been entered.

It is noted that the claim amendment filed 2/4/09 is different from the one proposed on 11/4/08, which has not been entered as an after-final amendment.

Status of Claims

Claims 2 and 8-13 are presently pending. Claims 10-13 have been previously withdrawn from further consideration for being drawing to nonelected invention, there being no allowable generic or linking claim. Therefore, only claims 2 and 8-9 are presently under consideration.

Claim Rejections-35 USC § 101/§ 112, First Paragraph

The rejection of claims 2 and 4-9 under 35 U.S.C. 101 because the claimed invention lacks patentable utility due to its not being supported by a specific, substantial, and credible utility or, in the alternative, a well-established utility, and the related rejection under 35 USC

11,2, first paragraph are withdrawn in view of the BPAI's decision in applicant's copending and closely related application, 10/959789. See the BPAI decision mailed 12/22/08.

Claim Rejections-35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 2 and 9 are rejected under 35 U.S.C. § 102(b) as being anticipated by Alexandrov et al. (EP 1033405 A2, September 6, 2000).

The reference and sequence alignments referred to in the following analysis have been provided to applicant in the Office action mailed 1/25/07.

This rejection is reiterated from the previous Office action mailed 9/4/08.

The claims are drawn to a purified polypeptide comprising an amino acid sequence having at least 98% (claim 2) or 99% (claim 9) sequence identity with the amino acid sequence of SEQ ID NO:44293.

Alexandrov et al. disclose multiple polypeptides including a polypeptide, a *Zea mays* polypeptide, comprising an amino acid sequence that shares a 99.5% overall match with the full-length sequence of the instant SEQ ID NO:44293. See the previously provided sequence alignment between SEQ ID NO:44293 and the sequence of database Geneseq accession number

AAG44786, which is the same sequence as that of SEQ ID NO:56142 disclosed by Alenxandrov et al.

Applicant's arguments filed 2/4/09 have been fully considered but they are not found persuasive.

Applicant again argues that Alexandrov et al. is not prior art against the claims because the sequence of the instant SEQ ID NO: 44293 is disclosed in prior application 09/654617 (filed 9/5/2000) and in 09/684016 (filed 10/10/2000), etc., to which priority is claimed in the instant application. Applicant asserts that "positions 205-864 of the nucleic acid sequence of SEQ ID NO:271143 in both US application No. 09/654617 and US application No. 09/684016 encode the amino acid sequence of SEQ ID NO:44293 in the captioned application. As such, the claims are entitled to a priority of at least Sepember 5, 2000, which is earlier than the September 6, 2000 publication date of Alexandrov et al." See page 13 of the response. This is not found persuasive. While the nucleic acid sequence encoding the polypeptide sequence of SEQ ID N:44293 of the instant application is present in a longer nucleic acid sequence disclosed in those prior application, there is no adequate description, in those prior applications, of a polypeptide having a sequence that is the same of the sequence of the instant SEQ ID NO:44293, let alone an adequate description of a purified polypeptide having a sequence that is at least 98% or 99% identical to the sequence of SEQ ID NO:44293. Therefore, there is no adequate disclosure in those prior applications for the instantly claimed polypeptide: a substantially purified polypeptide having an amino acid sequence that is at least 98% or 99% identical to the sequence of SEQ ID NO:44293 per 35 USC 112, first paragraph. This is akin to the situation where if in an application, the entire genomic sequence of an organism is disclosed, but there is no description

to any of the polypeptides this entire genomic sequence may encode, applicant is not in possession of those polypeptides.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Alexandrov et al. (EP 1033405 A2, September 6, 2000).

Claim 8 is drawn to a substantially purified polypeptide having an amino acid sequence that is 100% identical to the sequence of SEQ ID NO:44293.

As set forth above, Alexandrov et al. disclose multiple polypeptides including a polypeptide, a *Zea mays* polypeptide, comprising an amino acid sequence that shares a 99.5% overall match with the full-length sequence of the instant SEQ ID NO:44293. See the previously provided sequence alignment between SEQ ID NO:44293 and the sequence of database Geneseq accession number AAG44786, which is the same sequence as that of SEQ ID NO:56142 disclosed by Alenxandrov et al.

When one of ordinary skill in the art compared the sequence of instant SEQ ID NO:44293 and that of AAG44786, s/he would find that the only thing that causes the 0.5% difference between the two sequences is an "R" in the instant sequence but the corresponding amino acid in the database sequence is an unknown "X." Given that fact Alesandrov et al. disclose the database sequence is obtained from Zea mays, which is also the source of the instant sequence is obtained, and given the fact that the only difference between the two sequences is an unknown residue in the database sequence, and given that fact that many sequences in the database have sequencing errors, it would have been obvious to the one having ordinary skill in the art that it would be more likely than not these two sequences would be actually identical if the unknown residue is identified. S/he would have been motivated to use the nucleic acid sequence encoding the polypeptide sequence of AAG44786, which is disclosed by Alexandrov, et al. to isolate the nucleic acid molecules and sequence it to identify that particular residue that

is unknown in AAG44786. Based on all factors considered above, it would be more likely than not the unknown residue would be an "R."

Conclusion

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shubo (Joe) Zhou, whose telephone number is 571-272-0724. The examiner can normally be reached Monday-Friday from 8 A.M. to 4 P.M. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marjorie Moran, can be reached on 571-272-0720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public. For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.

/Shubo Zhou/

Shubo (Joe) Zhou, Ph.D.

Primary Patent Examiner